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PN - JP63166522 A 19880709
PD - 1988-07-09
PR - JP19860312477 19861227
OPD - 1986-12-27
TI - CYLINDRICAL OBJECT MADE OF FIBER REINFORCED RESIN
IN - HASHIMOTO HISANORI; TAMURA MORIO; SHIKASUMI YASUO
PA - HITACHI CONSTRUCTION MACHINERY; ARISAWA SEISAKUSHO
KK
IC - B29C67/14 ; B29D23/22

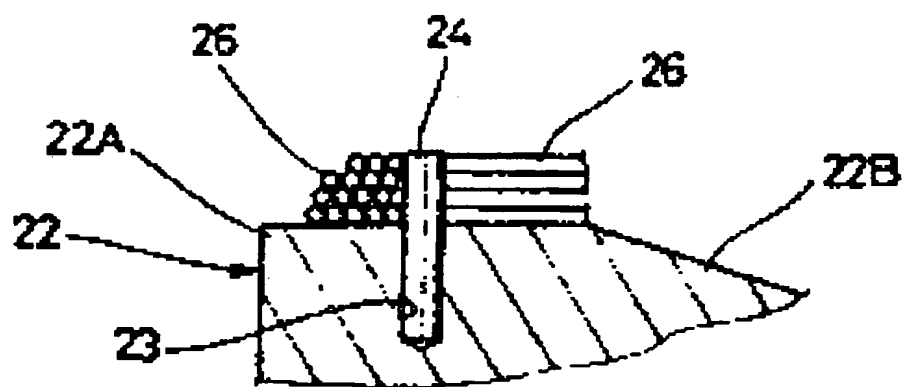
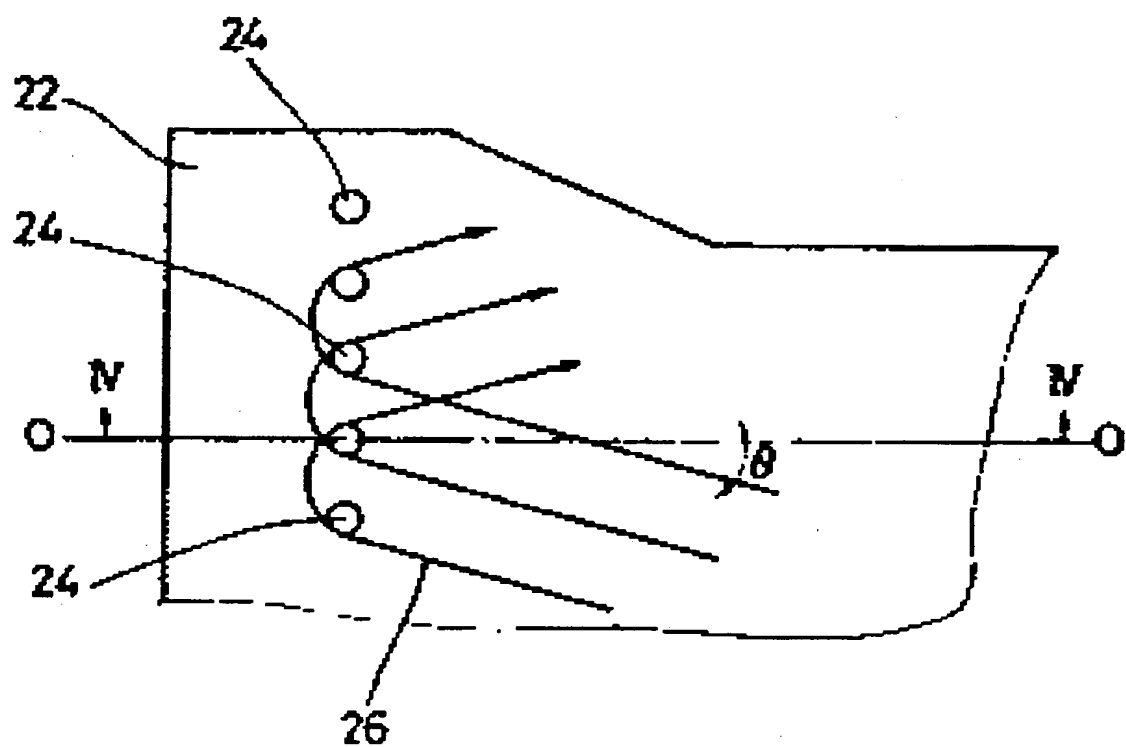
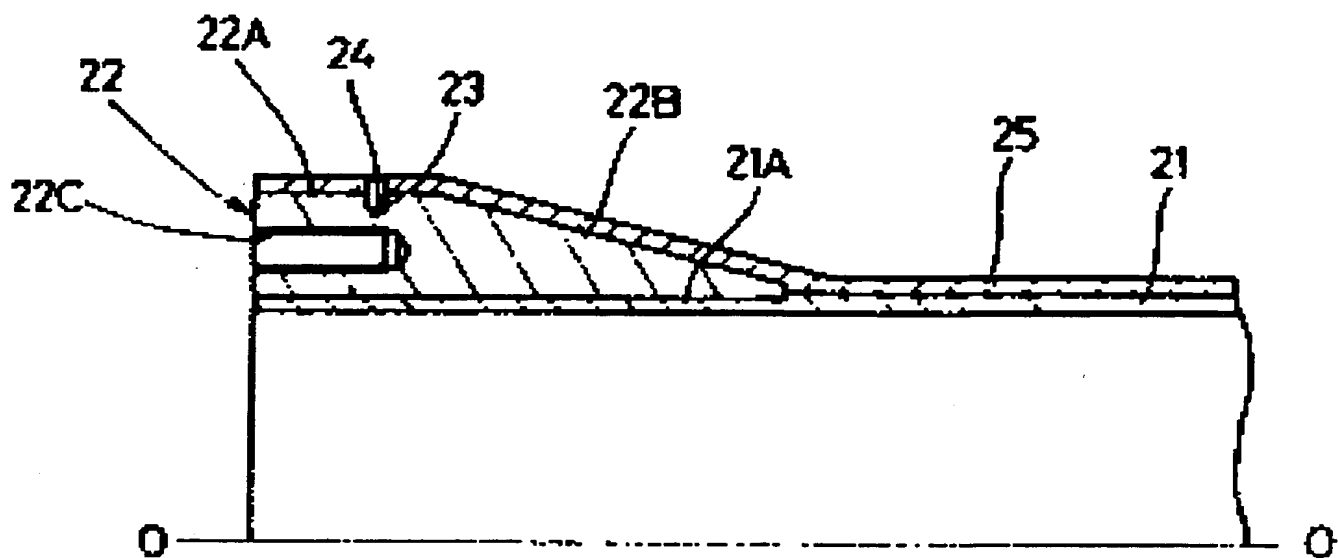
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TI - Fibre reinforced plastics pipe used e.g. as vehicle driving shaft - is
mfd. in process where fibre reinforced outer cylinder is moulded
over cured inner cylinder formed on mandrel, prior to removal of
mandrel
PR - JP19860312477 19861227
PN - JP63166522 A 19880709 DW198833 012pp
- JP3036660B B 19910603 DW199126 000pp
PA - (ARIA) ARISAWA SEISAKUSHO KK
- (HITT) HITACHI CONSTR MACHINERY CO LTD
IC - B29C67/14 ; B29D23/22 ; B29K105/08 ; B29L23/00
AB - J63166522 The inner cylinder of the pipe is moulded by winding
resin impregnated filaments on the mandrel. After the inner
cylinder is subjected to curing, the fitting with the pins is mounted
and fixed on the end of the inner cylinder. Then, the resin
impregnated filaments are wound round both the fitting and the
inner cylinder under the proper tension using the pins so that the
outer cylinder is moulded. After curing, the mandrel is drawn out of
the moulded fibre reinforced plastic pipe.
- USE/ADVANTAGE - Both the fitting and the inner cylinder are firmly
fixed and reinforced by the outer cylinder in a fibre reinforced
plastics pipe. The fibre reinforced plastics pipe can be used e.g. as
the driving shaft of a vehicle or the tube of a hydraulic cylinder. (0/6)
OPD - 1986-12-27
AN - 1988-232165 [33]

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PN - JP63166522 A 19880709
PD - 1988-07-09
AP - JP19860312477 19861227

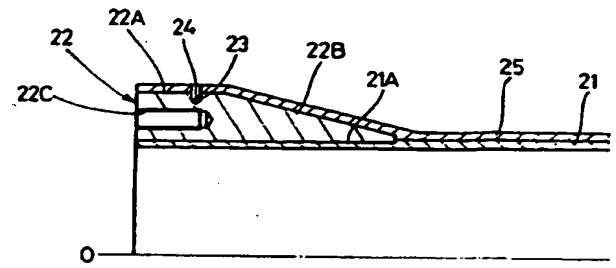
- IN - HASHIMOTO HISANORI; others02
- PA - HITACHI CONSTR MACH CO LTD; others01
- TI - CYLINDRICAL OBJECT MADE OF FIBER REINFORCED RESIN
- AB - PURPOSE:To improve the fatigue resistance and shock resistance of a cylindrical object, while preventing the drawing out of a fitment member from an outer cylinder by a method in which a hanging part is provided at the fitment member fitted onto the end part of an inner cylinder in axial direction, and then the fiber material impregnated with resin is wound on the entire range from the outer peripheral surface of the inner cylinder to the outer peripheral surface of the fitment member, while hanging the fiber material on said hanging part and thus an outer cylinder is formed.
- CONSTITUTION:The fitment member 22 which is formed with fiber reinforced resin and is fitted onto the both end sides of inner cylinder 21 in axial direction, is made with metal or ceramic material, and is provided with a cylindrical cover, with the intermediary of a bolt fixed with screw in a screw hole 22. The pin 24 of metallic material is fixedly inserted into the small hole 23 of the member 22, and its projected side forms a hanging part so as to hang fiber material 26 and wind it reversely. An outer cylinder 25 is formed by winding the string-form fiber material 26 impregnated with resin on the entire surface from the outer surface of the inner cylinder 21 to the outer peripheral surface of the cylindrical part 22A of each member 22.
- SI - B29C67/14
- I - B29D23/22



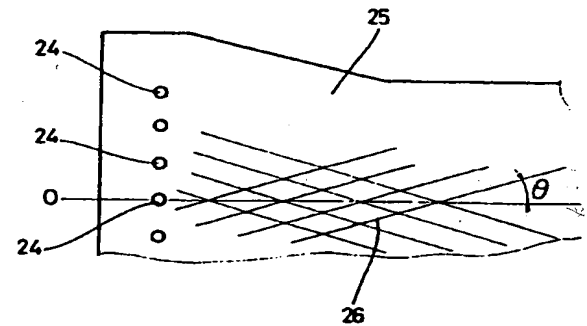
34, 43, 64, 74, 83, 94, 104...
 外筒、26...纖維材料、51...凸部、82...引掛
 け部、102...引掛け金具、102C...突起、
 111...プロペラシャフト、 θ ...巻角。

特許出願人	日立建機株式会社
同	株式会社有沢製作所
代理人 弁理士	広瀬和彦
同	中村直樹

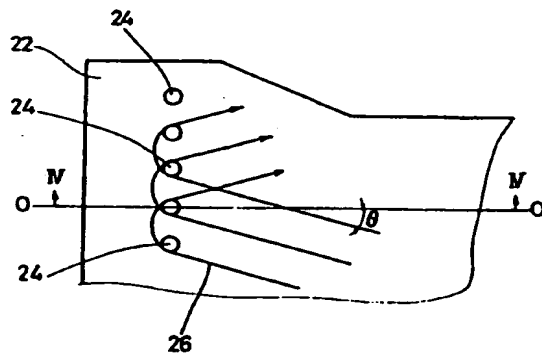
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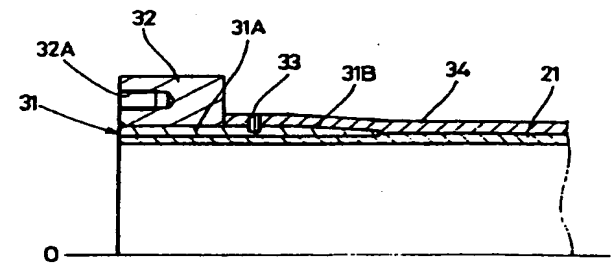
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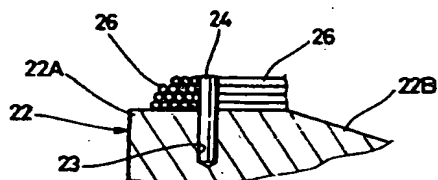
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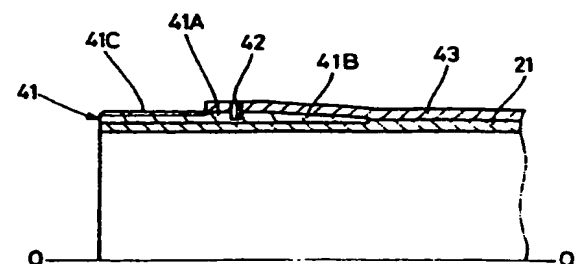
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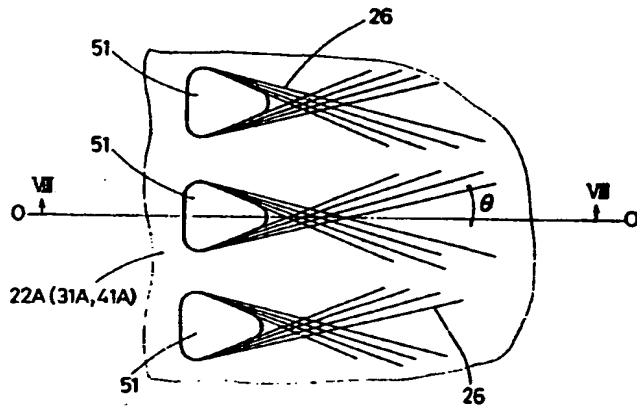
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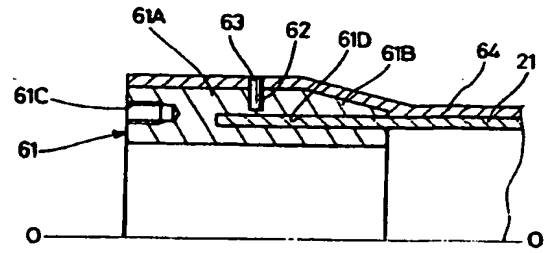
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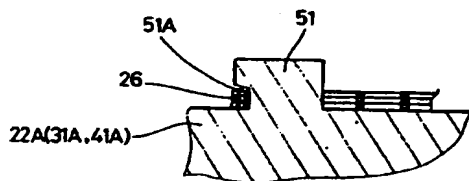
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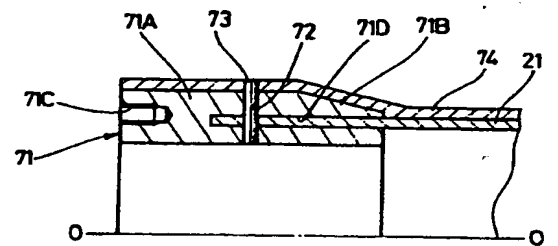
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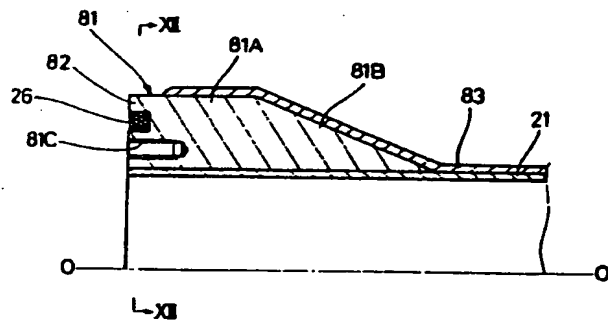
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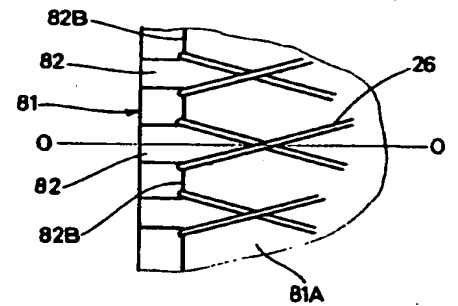
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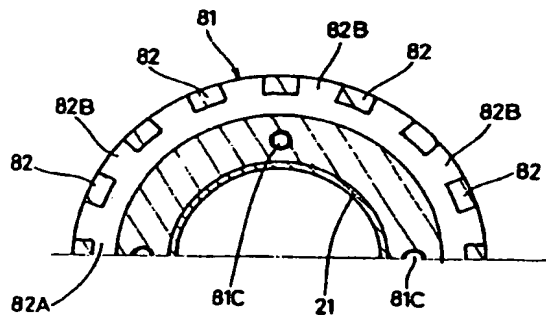
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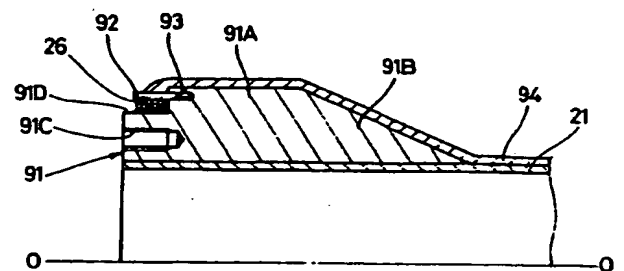
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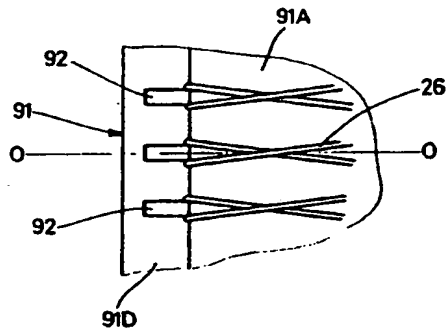
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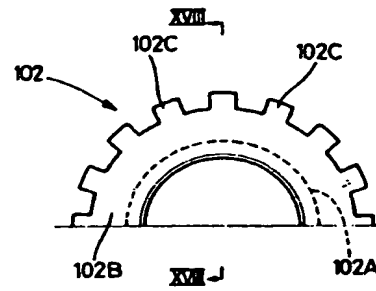
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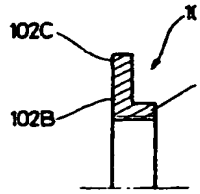
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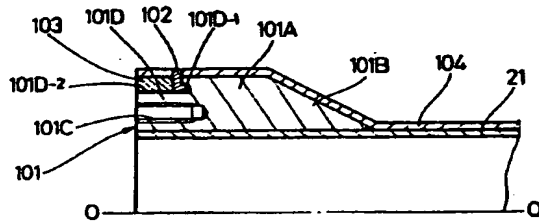
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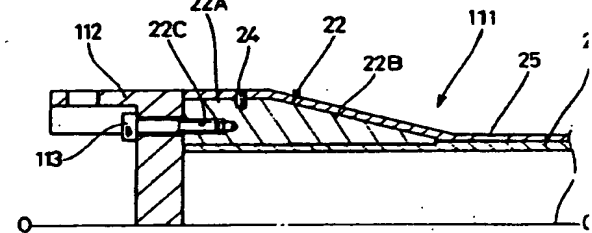
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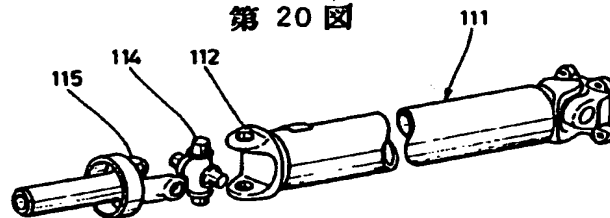
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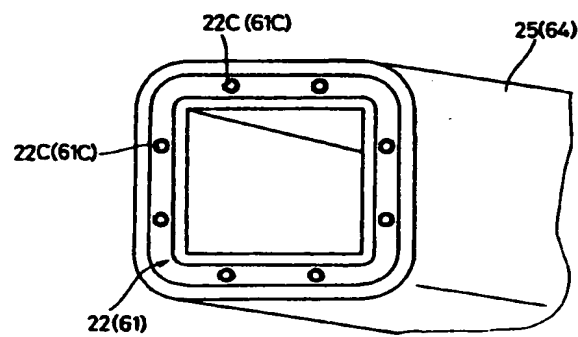
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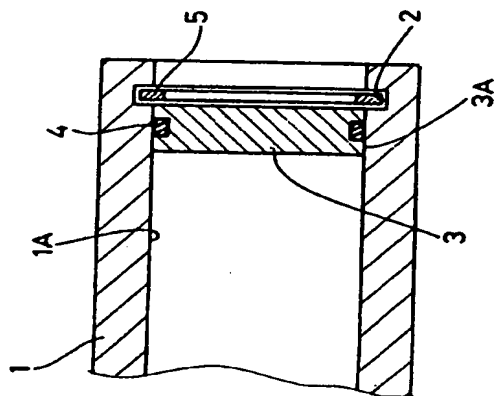
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第 21 図



第 22 図



第 23 図

